

Fiscal Evaluation of Three Scenarios for the Miami-Dade County Agriculture and Rural Area Study

Prepared for:

Miami-Dade County, Florida

June 16, 2003

Prepared by



Tischler & Associates, Inc.
Fiscal, Economic, and Planning Consultants
Bethesda, Maryland
Pasadena, California

Table of Contents

I.	Executive Summary	1
A.	Background	1
B.	Fiscal Impact Methodology	1
C.	Development Scenarios	2
D.	Fiscal Impact Results	3
1.	Average Annual Results	3
2.	Annual Results	4
E.	Explanation of the Results	5
II.	Methodology and Major Assumptions	7
III.	Development Scenarios	8
IV.	Fiscal Impact Results – Miami-Dade County	10
A.	Average Annual Results	10
B.	Annual Results	11
C.	Revenue and Expenditure Details	12
1.	Operating Revenue	12
2.	Capital Revenue	14
3.	Operating Expenditures	16
4.	Capital Expenditures	18
V.	Fiscal Impact Results – School Board	21
A.	Average Annual Results	21
B.	Annual Results	22
C.	Revenue and Expenditure Details	24
1.	Revenue	24
2.	Expenditures	25



**TISCHLER &
ASSOCIATES, INC.**

4701 Sangamore Rd
Suite N210
Bethesda, MD 20816
(301) 320-6900
Fax: (301) 320-4860

80 Annandale Road
Pasadena, CA 91105-1404
(818) 790-6170
Fax: (818) 790-6235

(800) 424-4318

tischlerassociates.com

I. EXECUTIVE SUMMARY

A. Background

As part of the Agriculture and Rural Area Study consultant team led by Duany Plater-Zyberk & Company, Tischler & Associates, Inc. (TA) evaluated the fiscal impact of the continuation of the current predominately agricultural land use pattern in the Study Area, compared to that of a predominately suburban residential buildout. This evaluation concluded that new growth in the study area generates average annual net *deficits* under both scenarios. Information from this previous fiscal evaluation along with information generated by other members of the consultant team was presented to the Citizens Advisory Committee (CAC) for this project and the general public over a two-day charette. Based on input received from the CAC and the general public, a preferred scenario has been developed reflecting policies related to balancing desires for agricultural preservation while at the same time providing avenues to satisfy development pressures.

B. Fiscal Impact Methodology

This fiscal impact analysis determines whether revenues generated by new growth are enough to cover the resulting costs for service and facility demands placed on the County and School Board for the 23-year period between 2002 and 2025. The scenarios evaluated in this analysis are reflected through numerical projections focusing on population and housing units, as well as retail employment and building area needed to support the residential development.

The fiscal impact analysis prepared for this assignment uses a “snapshot” approach, using the Fiscal Year 2002 Budget to determine cost/revenue factors and levels of service for Miami-Dade County and the School Board. The 2002 population, dwelling unit, job and enrollment estimates were used to calculate unit costs and service level thresholds. In summary, the “snapshot” approach does not attempt to speculate about how levels of service, costs, revenues and other factors will change over 23 years. Instead, it evaluates the fiscal impact to the County and School Board as it currently conducts business under the present budget.

The specific methodology used to project growth related costs and revenues was a modified average cost methodology that incorporates marginal cost information wherever possible. For example, many of the administrative/general government costs that are impacted by *general* growth in the County, regardless of location, are projected using an average cost methodology. To the extent possible, services and facilities that are impacted by the physical location and pattern of development (i.e. Fire and Rescue) are projected using a marginal cost methodology.

Fiscal Impact Analysis
•
Capital Improvement Programs
•
Impact Fees
•
Growth Policy Planning
•
Economic and Market Analysis
•
Fiscal and Economic Software

C. Development Scenarios

The two scenarios evaluated by TA in the previous fiscal impact analysis were developed by the consultant team based on the original scope of services and input from the Citizens Advisory Committee. In addition to the fiscal evaluation conducted by TA, the consultant team evaluated the scenarios for their development potential, relative rates of absorption and the conversion of agricultural land. The two scenarios addressed two distinct development patterns:

- Development of rural residences under the existing agricultural zoning at 1 dwelling per 5 acres; and
- Development under low-density urban conditions at an average density of 4.5 dwellings per acre.

As stated previously, the fiscal evaluation concluded that new growth in the study area generates average annual net *deficits* under both scenarios. Based on input received from the CAC and the general public, a preferred scenario has been developed reflecting policies related to balancing desires for agricultural preservation while at the same time providing avenues to satisfy development pressures. This preferred scenario assumes:

- Retention of agriculture land value;
- Continuation of conventional rural estate development;
- Allowing agriculture operations to extract value from the land without “selling the farm” through implementation of a purchase of development rights (PDR) program;
- Providing developers with an additional avenue to create profitable urban development through implementation of a transfer of development rights (TDR) program; and
- Preserving land resources for agricultural pursuits.

The table below summarizes the *net increases* in population and housing units, as well as retail employment and building area needed to support residential development for each of the three scenarios.

Scenario Net Increases - 2002-2025
Miami-Dade County Agricultural and Rural Area Study

Population, Housing & Employment	SCENARIO		
	Rural/Ag.	Suburban	Preferred
Population Component			
Population within Study Area	37,037	236,675	9,576
Population Transferred outside Study Area through TDR	-	-	20,959
Total	37,037	236,675	30,535
Housing Unit Component			
Housing Units within Study Area (1)	13,041	83,336	3,372
Housing Units Transferred through TDR Program (2)	-	-	7,380
Development Rights Extinguished through PDR Program (2)	-	-	2,737
Total	13,041	83,336	13,489
Nonresidential Component			
Retail Employment (3)	522	3,333	430
Retail Square Footage (4)	156,494	1,000,035	129,024

(1) Based on "Definition of Scenarios for Miami-Dade Agricultural and Rural Areas Study" memo, prepared by Planning Works

(2) Based on "Definition of Preferred Scenario" memo, prepared by Planning Works

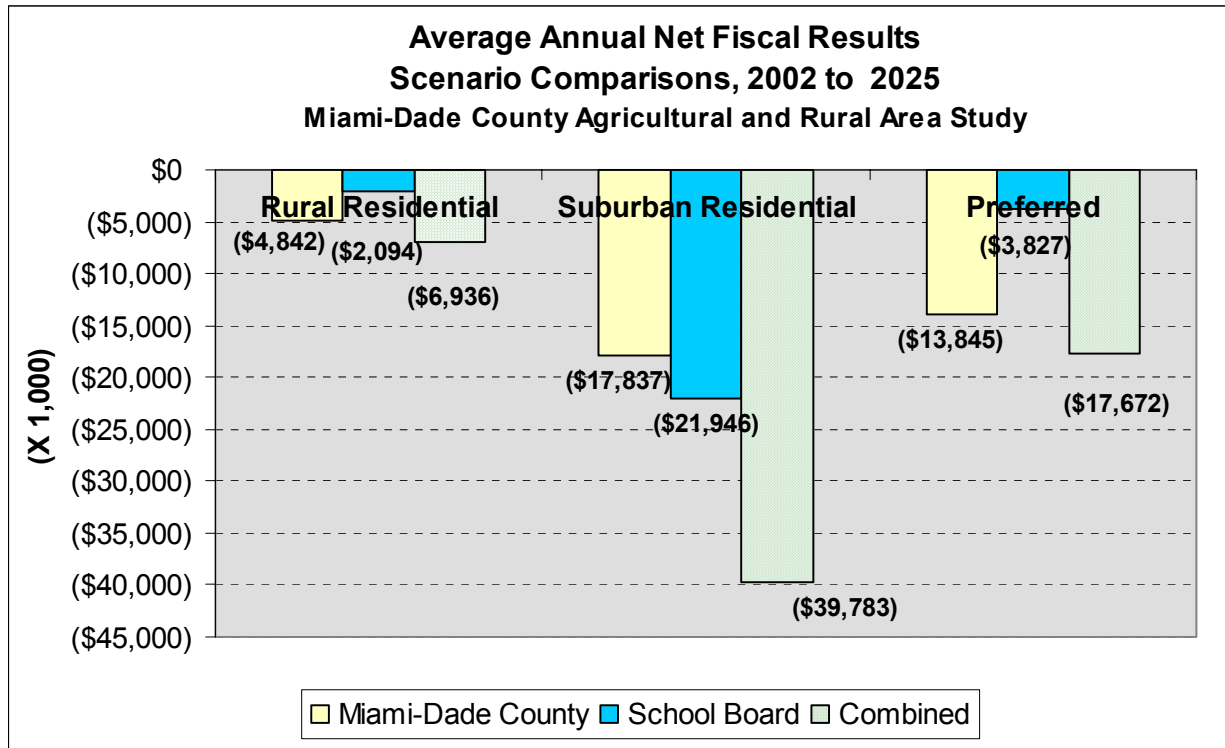
(3) Assumes 300 square feet per employee, based on data from Urban Land Institute

(4) Assumes 12 square feet per housing unit

D. Fiscal Impact Results

1. Average Annual Results

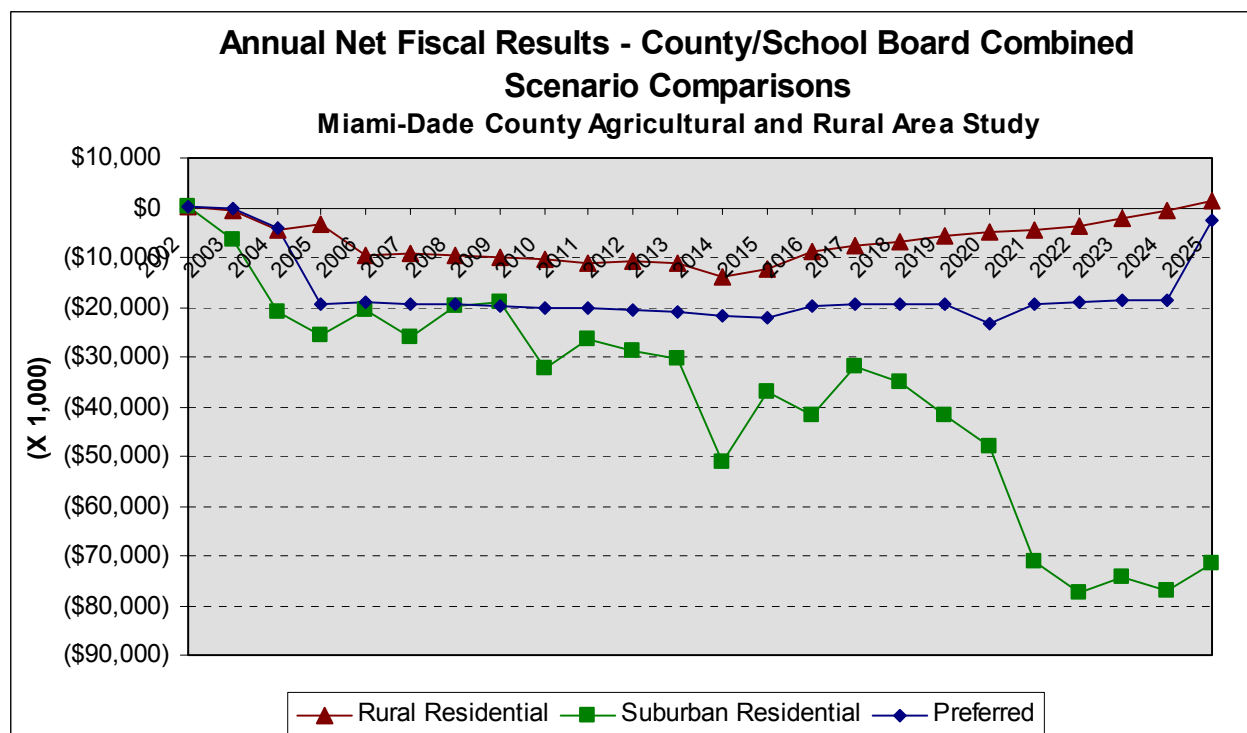
The chart below shows the average annual net fiscal results (revenues minus expenditures) over the 23-year analysis period for the Preferred scenario compared to the two development scenarios evaluated previously. The fiscal results are presented for Miami-Dade County Government (Countywide General Fund, Unincorporated Municipal Service Area General Fund and the Capital Projects Budget), the School Board, as well as the combined results to County and School Board. *All results are those accruing from new growth only, and do not include costs and revenues from the existing population and employment base of the study area.*



As the chart above indicates, new growth in the study area generates average annual net *deficits* under all three scenarios. The Rural Residential scenario generates the lowest combined average annual net deficit over the 23-year analysis period at \$6.9 million. The Preferred scenario generates a combined average annual net deficit of \$17.6 million. Because of the substantially greater cost structure required to serve the Suburban Residential scenario, particularly for schools, this scenario generates combined average annual net deficits of \$39.7 million.

2. Annual Results

The chart below shows the annual net results for Miami-Dade County Government and the School Board combined for all three development scenarios. By showing the results annually, the magnitude, rate of change, and timeline of deficits and revenues can be observed over the 23-year analysis period.



The greatest annual net deficits are generated by the Suburban Residential scenario. The annual net deficits are significantly lower under the Rural Residential and Preferred scenarios. The “bumpy” nature of the annual trend lines, particularly for the Suburban Residential scenario, result because capital costs and/or major operating costs are incurred during particular years. For example, when an enrollment threshold for a particular type of school is reached over time, a new school is “built” by the fiscal model. The same effect occurs when new staff is “hired” by the fiscal model, as is the case with the increased staffing cost associated with the opening of a new school necessitated by new growth.

E. Explanation of the Results

The following points highlight the major reasons for the results.

- Although the Preferred scenario assumes the lowest amount of development, average annual net deficits to Miami-Dade County are still greater than those generated by the Rural Residential scenario. This is the result of the costs associated with implementing the purchase of development rights program (PDR), which assumes the issuance of a \$130 million bond. Average annual net deficits to the School Board are larger primarily as a result of the lower amount of revenue generated due to less residential development, as costs are somewhat similar due to the marginal nature of the analysis, where development under both scenarios triggers the need for a new high school in the same year.

- Due to the magnitude of residential development assumed under the Suburban Residential scenario, the Urban Development Boundary must be extended to accommodate the increased density, resulting in greater costs to Miami-Dade County Government, particularly for Police, Fire Rescue, Parks and Recreation and the Library District.
- Contrary to the Suburban Residential scenario, the Preferred and Rural Residential scenarios generate *smaller* average annual net deficits to the School Board than they do to Miami-Dade County Government. This is due to the low number of additional public school students generated under these scenarios. As a result of the current student capacity available in schools serving the study area, new development under the Preferred and Rural Residential scenarios generate the need for only one additional facility, a new high school, whereas the Suburban Residential scenario generates the need for 22 new schools.
- In summary, the Suburban Residential scenario generates substantially larger average annual net deficits than the Preferred and Rural Residential scenarios due to the costs associated with the greater amount of residential development assumed, approximately 83,000 additional housing units compared to 13,000 housing units under the Rural Residential scenario and the 10,750 assumed under the Preferred scenario. However, when viewed on a per unit basis, the combined net deficit per unit is *less* under the Suburban Residential scenario, at \$477 per unit compared to \$532 per unit under the Rural Residential scenario. This is due to the economies of scale that occur with higher density residential development.

II. METHODOLOGY AND MAJOR ASSUMPTIONS

This fiscal impact analysis uses a “snapshot” approach, using the Fiscal Year 2002 Budget to represent a “snapshot” of the County’s current costs, revenues and levels of service. The 2002 population, job and dwelling unit estimates were used to calculate unit costs and service level thresholds. In summary, the “snapshot” approach does not attempt to speculate about how levels of service, costs, revenues and other factors will change over 23 years. Instead, it evaluates the fiscal impact to the County as it currently conducts business under the present budget.

The following major assumptions regarding the fiscal impact methodology should be noted.

Marginal, Growth-Related Costs and Revenues: For this analysis, costs and revenues that are directly attributable to new development are included. Some costs and revenues are not expected to be impacted by demographic changes, and may be fixed in this analysis. To determine fixed costs and revenues, TA reviewed the FY2002 budget and all available supporting documentation. Based on this review, preliminary assumptions were developed that were reviewed and discussed with appropriate County department representatives. In some cases, a determination was made based on TA’s extensive national experience conducting public sector fiscal impact analyses.

Level of Service: The cost projections are based on the "snapshot approach" in which it is assumed the current level of service, as funded in the FY2002 budget, will continue through the 23-year analysis period.

Revenue Structure and Tax Rates: Revenues are projected assuming that the current revenue structure and tax rates, as defined by the FY2002 budget, will not change during the analysis period.

Inflation Rate: The rate of inflation is assumed to be zero throughout the projection period, and cost and revenue projections are in constant 2002 dollars. This assumption is in accord with current budget data and avoids the difficulty of speculating on inflation rates and their effect on cost and revenue categories. It also avoids the problem of interpreting results expressed in inflated dollars over an extended period of time.

Non-Fiscal Evaluations: It should be noted that while a fiscal impact analysis is an important consideration in planning decisions, it is only one of several issues that should be considered. Environmental and social issues, for example, should also be considered when making planning and policy decisions. The above notwithstanding, this analysis will enable interested parties to understand the fiscal implications of future development.

III. DEVELOPMENT SCENARIOS

The two scenarios evaluated in the previous fiscal impact analysis were developed by the consultant team for evaluation of fiscal impacts based on the original scope of services and input from the Citizens Advisory Committee. The two scenarios addressed two distinct development patterns:

- Development of rural residences under the existing agricultural zoning at 1 dwelling per 5 acres; and
- Development under low-density urban conditions at an average density of 4.5 dwellings per acre.

The table below summarizes the *net increases* in population and housing units, as well as retail employment and building area needed to support residential development for each scenario. See *"Definition of Scenarios for Miami-Dade Agricultural and Rural Area Study"* memorandum, prepared by Planning Works and Freilich, Leitner & Carlisle, for a more detailed description of how the scenario projections were developed.

Scenario Net Increases - 2002-2025
Miami-Dade County Agricultural and Rural Area Study

Population, Housing & Employment	SCENARIO	
	Rural/Ag.	Suburban
<i>Residential Component</i>		
Population (1)	37,037	236,675
Housing Units (1)	13,041	83,336
<i>Nonresidential Component</i>		
Retail Employment (2)	522	3,333
Retail Square Footage (3)	156,494	1,000,035

(1) Based on "Definition of Scenarios for Miami-Dade Agricultural and Rural Areas Study" memo

(2) Assumes 300 square feet per employee, based on data from Urban Land Institute

(3) Assumes 12 square feet per housing unit

The consultant team evaluated the two scenarios for their development potential, their relative rates of absorption, the conversion of agricultural land and their fiscal impacts. As stated previously, the fiscal evaluation concluded that new growth in the study area generates average annual net *deficits* under both scenarios. Based on input received from the CAC and the general public, a preferred scenario has been developed reflecting policies related to balancing desires for agricultural preservation while at the same time providing avenues to satisfy development pressures. This preferred scenario assumes implementation of purchase of development rights (PDR) program and transfer of development rights (TDR) programs, as well as conventional rural estate development with a goal of:

- Retaining agriculture land value;
- Allowing agriculture operations to extract value from the land without "selling the farm";

- Providing developers with an additional avenue to create profitable urban development; and
- Preserving land resources for agricultural pursuits.

The preferred scenario assumes a continuation of the current development pattern, which consists of low-density residential development under large lot zoning. The average minimum lot size would be 5 acres. This development pattern and density serves as the baseline to establish the amount of development rights available within the study area. The following assumptions were built into the proposed development scenario:

- Current development trends, following existing zoning, will result in a gross residential density in the study area of 1 dwelling per 5 acres;
- Miami-Dade County will make the necessary policy and regulatory amendments to implement the scenario;
- Infrastructure improvements will be focused within the UDB;
- A \$130 million bond issue to fund the PDR program will be approved;
- If all the remaining undeveloped land is counted in 5-acre plots, one out of 4 plots will be developed at 5-acres, and the remaining 3 of 4 will be purchased or transferred for a target conservation of dwelling unit per 20 acres;
- TDR units will be transferred inside the UDB with specified receiving areas such as transit corridors.

The table below summarizes the number of development rights and acres that would be affected by the PDR, TDR and conventional estate development. A total of 50,584 acres (79 sq. miles) would be preserved for agriculture purposes while 16,861 acres (26 sq. miles) would be developed. See *"Definition of Preferred Scenario for Miami-Dade Agricultural and Rural Area Study"* memorandum, prepared by Planning Works and Freilich, Leitner & Carlisle, for a more detailed description of how the scenario assumptions were developed.

Preferred Scenario Development Rights Allocation - 2002-2025
Miami-Dade County Agricultural and Rural Area Study

	Development Rights	Retained Ag. Acres	Population
Development Rights Extinguished Through PDR	2,737	13,684	-
Development Rights Transferred to UDB	7,380	36,900	20,959
Single Family Units on 5-Acre Lots	3,372	-	9,576
Total	13,489	50,584	30,535

Based on "Definition of Preferred Scenario" memo, prepared by Planning Works

IV. FISCAL IMPACT RESULTS – MIAMI-DADE COUNTY

The fiscal impacts are discussed in terms of average annual and annual net results. The average annual results are discussed first in Part A below because it provides a good way of comparing multiple scenarios. Annual results are then discussed in Part B, followed by revenue and expenditure detail in Part C. All results are those from new growth only and do not include costs and revenues from the existing population and employment base of the study area.

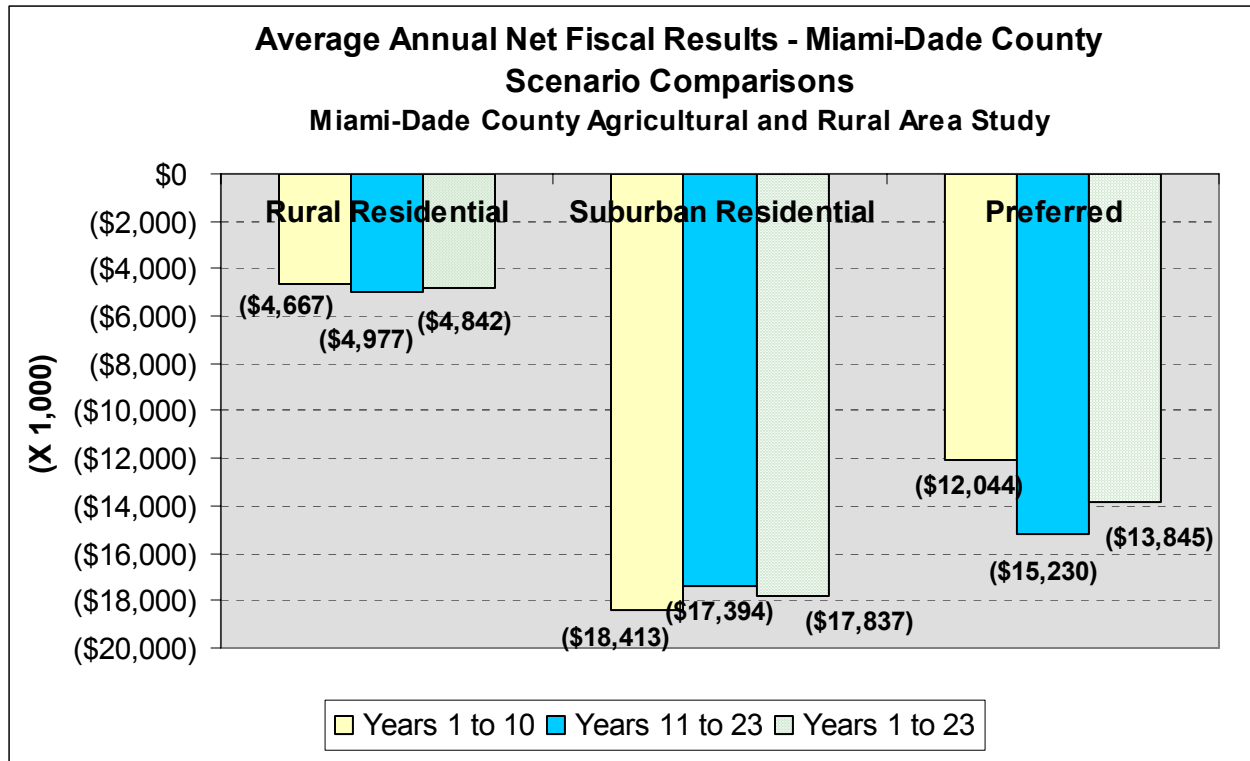
A. Average Annual Results

The charts below summarize the average annual net fiscal results (revenues minus expenditures) for Miami-Dade County Government (Countywide General Fund, Unincorporated Municipal Service Area General Fund and the Capital Projects Budget). The results are shown for three time periods: 1) Years 1-10, 2) Years 11-23, and 3) Years 1-23.

As the chart below indicates, new growth in the study area generates average annual net *deficits* to Miami-Dade County Government under all three scenarios. Compared to the Suburban Residential and Rural Residential scenarios evaluated previously, the Preferred scenario generates the second greatest average annual net deficits at \$13.8 million. Although the Preferred scenario assumes the lowest amount of development, a key component is the implementation of a purchase of development rights program (PDR), which assumes the issuance of a \$130 million bond. The debt service payments for this bond are the sole reason for the magnitude of the deficits generated by this scenario.

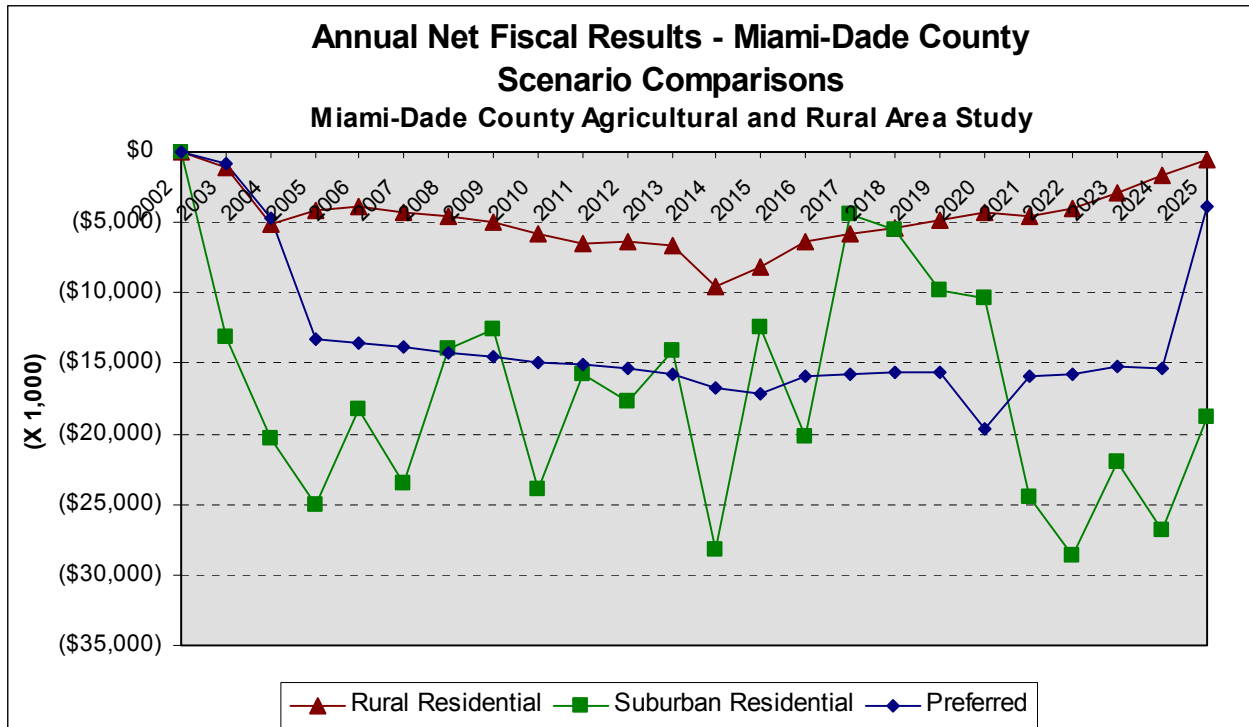
The largest average annual net deficits generated over the 23-year analysis period occur under the Suburban Residential scenario at \$17.8 million. The Rural Residential scenario generates average annual net deficits of \$4.8 million. As discussed in the previous analysis, the greater deficits generated by the Suburban Residential scenario are due to the magnitude of residential development assumed, which is six times that assumed under the Preferred and Rural Residential scenarios. Because of the densities assumed under the Suburban Residential scenario, an extension of the Urban Development Boundary is required, resulting in greater costs to Miami-Dade County Government, particularly for Police, Fire Rescue, Parks and Recreation and the Library District.

Although all three scenarios assume a greater amount of new residential development during years 11-23, in percentage terms, the number of new housing units absorbed annually under the Preferred and Rural Residential scenarios is four times the annual rate assumed during the first ten years. This higher rate of growth in the later years triggers thresholds for certain capital facilities and associated operating expenses, resulting in a slightly greater average annual net deficit during the later years. Under the Suburban Residential scenario, the number of new housing units absorbed annually is only twice the annual rate assumed during the first ten years, resulting in a more even distribution of costs and a faster accrual of revenue. As a result, the average annual net deficit is slightly lower during the later years.



B. Annual Results

The chart below shows the annual net results for Miami-Dade County Government (Countywide General Fund, Unincorporated Municipal Service Area General Fund and the Capital Projects Budget) for the three scenarios. By showing the results annually, the magnitude, rate of change, and timeline of deficits and revenues can be observed over the 23-year analysis period.



Annual net deficits are generated in every year of the analysis period, with the largest annual net deficits generated by the Suburban Residential scenario. The “bumpy” nature of the annual trend lines result because capital costs, or major operating costs, are incurred during particular years. For example, when a certain threshold for additional park construction is reached, a new park facility is “built” by the fiscal model. The same effect occurs when new staff is “hired” by the fiscal model, as is the case with the increased staffing cost associated with the opening of a new fire station necessitated by new growth.

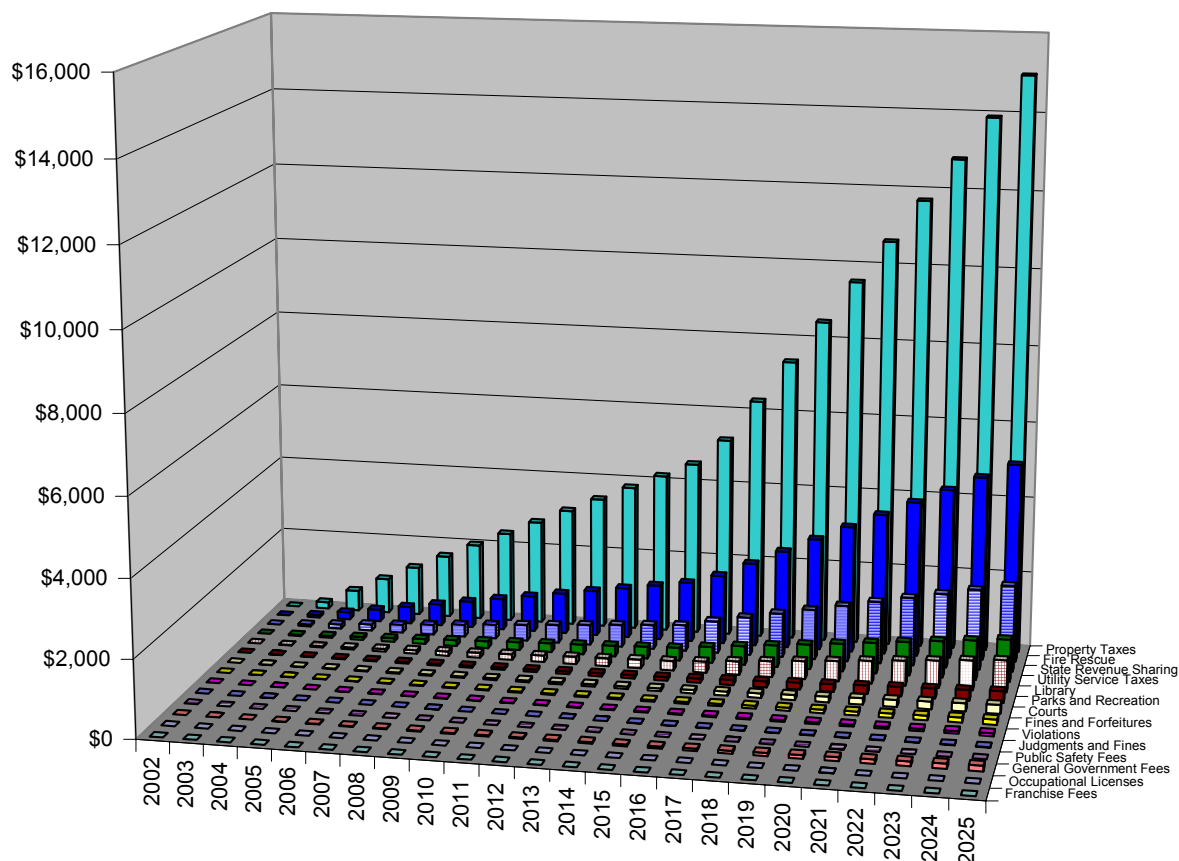
The annual net results for the Preferred scenario are similar to those generated by the Rural Residential scenario in the initial years, as the residential development schedules are essentially the same. The annual net deficits then increase sharply in year four when the \$130 million bond is issued for implementation of the purchase of development rights (PDR) program. The annual net results follow a similar pattern for most of the remaining years of the analysis period and then decline sharply at the end of the 20-year PDR bond repayment period.

C. Revenue and Expenditure Details

1. Operating Revenue

The chart below shows growth-related operating revenue to Miami-Dade County Government from 2002 to 2025 under the Preferred scenario. The revenue shown is in constant 2002 dollars and the same general relationship occurs between the Preferred scenario and the other scenarios, with only differences in magnitude and/or minor variations of the relative differential between revenue types. As the chart indicates, the greatest amount of revenue comes from property taxes, fire and rescue revenue, state revenue sharing and utility service fees.

Annual Revenues - Miami-Dade County Government (x\$1,000)
Preferred Scenario



The table below shows cumulative operating revenue to Miami-Dade County for all three scenarios, broken down by major source. Compared to the Suburban Residential and Rural Residential scenarios evaluated previously, the Preferred scenario generates the least cumulative operating revenue at \$223.6 million. This is because of the lower amount of development assumed under this scenario. Due to the magnitude of residential development assumed under the Suburban Residential scenario, this scenario generates the greatest cumulative operating revenue at \$1.7 billion. The Rural Residential scenario generates cumulative operating revenue of \$269.3 million. The table below also illustrates the County's reliance on property tax, which comprises 57% to 61% of growth-related operating revenue, depending on scenario. Several revenue sources are considered fixed sources relative to new growth within the County, based on conversations with County staff.

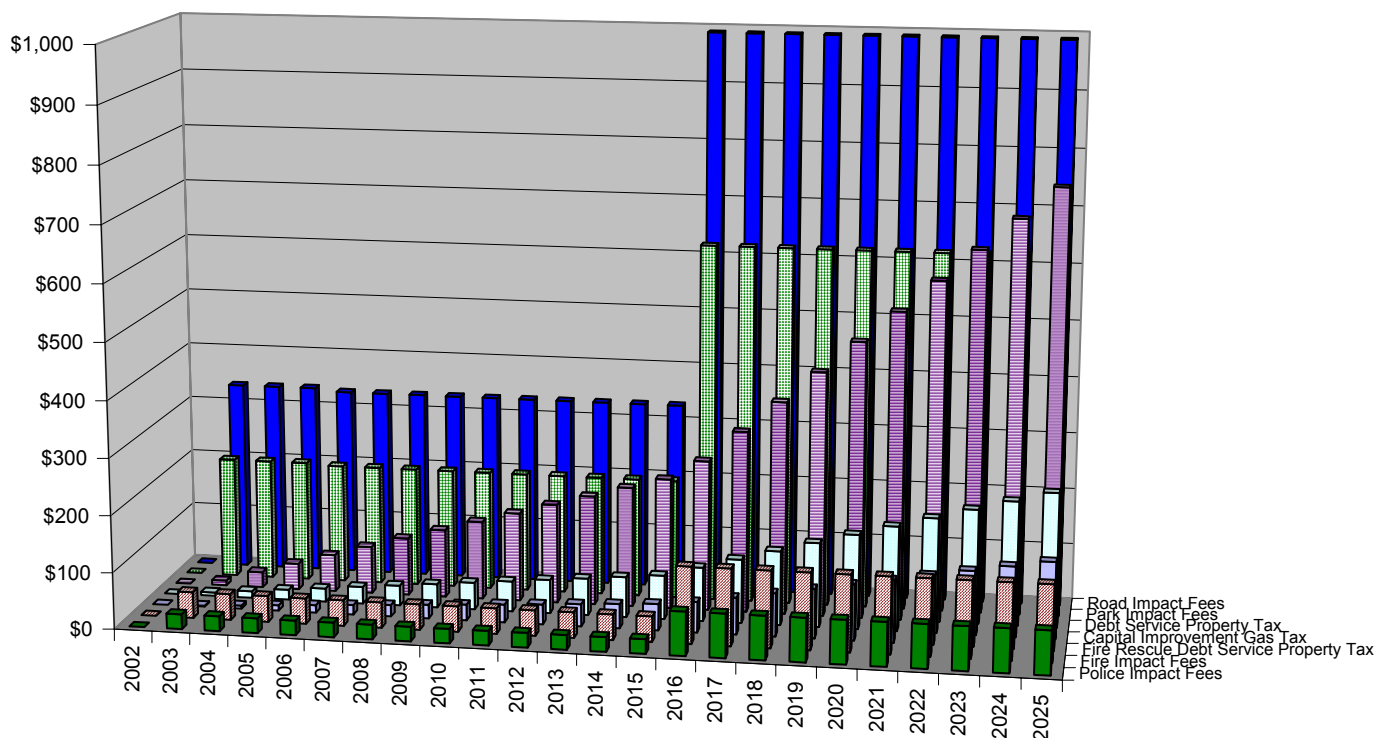
General Fund Operating Revenue - Scenario Comparisons (x\$1,000)
Miami-Dade County Agricultural and Rural Area Study

Category	SCENARIO					
	Rural Residential	%	Suburban Residential	%	Preferred	%
Property Taxes	\$163,882	61%	\$974,566	57%	\$131,987	59%
Sales, Use & Fuel Taxes	\$0	0%	\$0	0%	\$0	0%
Franchise Fees	\$0	0%	\$0	0%	\$0	0%
Utility Service Taxes	\$10,360	4%	\$88,369	5%	\$10,017	4%
Occupational Licenses	\$19	0%	\$159	0%	\$18	0%
State Revenue Sharing	\$21,032	8%	\$179,404	10%	\$20,336	9%
General Government Fees	\$1,289	0%	\$10,998	1%	\$1,247	1%
Public Safety Fees	\$28	0%	\$236	0%	\$27	0%
Court-Related Revenue	\$2,133	1%	\$18,194	1%	\$2,062	1%
Judgments and Fines	\$130	0%	\$1,113	0%	\$126	0%
Violations	\$666	0%	\$5,678	0%	\$644	0%
Fines and Forfeitures	\$1,278	0%	\$10,899	1%	\$1,235	1%
Interest on Investments	\$0	0%	\$0	0%	\$0	0%
Miscellaneous	\$0	0%	\$0	0%	\$0	0%
Transfers	\$0	0%	\$0	0%	\$0	0%
Carryover	\$0	0%	\$0	0%	\$0	0%
Library Revenue	\$9,103	3%	\$54,336	3%	\$7,344	3%
Fire Rescue Revenue	\$56,635	21%	\$340,804	20%	\$45,863	21%
Parks and Recreation Revenue	\$2,827	1%	\$24,116	1%	\$2,734	1%
TOTAL	\$269,382	100%	\$1,708,871	100%	\$223,639	100%

2. Capital Revenue

The chart below shows growth-related capital revenue to Miami-Dade County Government from 2002 to 2025 under the Preferred scenario. The revenue shown is in constant 2002 dollars. This chart depicts the “lumpy”, nature of one-time impact fees, as well as the compounding nature of annual revenues such as property tax for debt service and capital improvements gas tax.

Annual Capital Revenues - Miami-Dade County Government (x\$1,000)
Preferred Scenario



The table below shows cumulative capital revenue to Miami-Dade County for all three scenarios. Similar to operating revenue, the Preferred scenario generates the least cumulative capital revenue at \$36.6 million. This is due to the lower amount of development assumed under this scenario. The Suburban Residential scenario generates the greatest cumulative capital revenue at \$281.6 million due to the magnitude of residential development assumed under this scenario. The Rural Residential scenario generates cumulative operating revenue of \$42.1 million. As the table below illustrates, the County relies heavily on one-time impact fees from new development, as well as property tax for debt service.

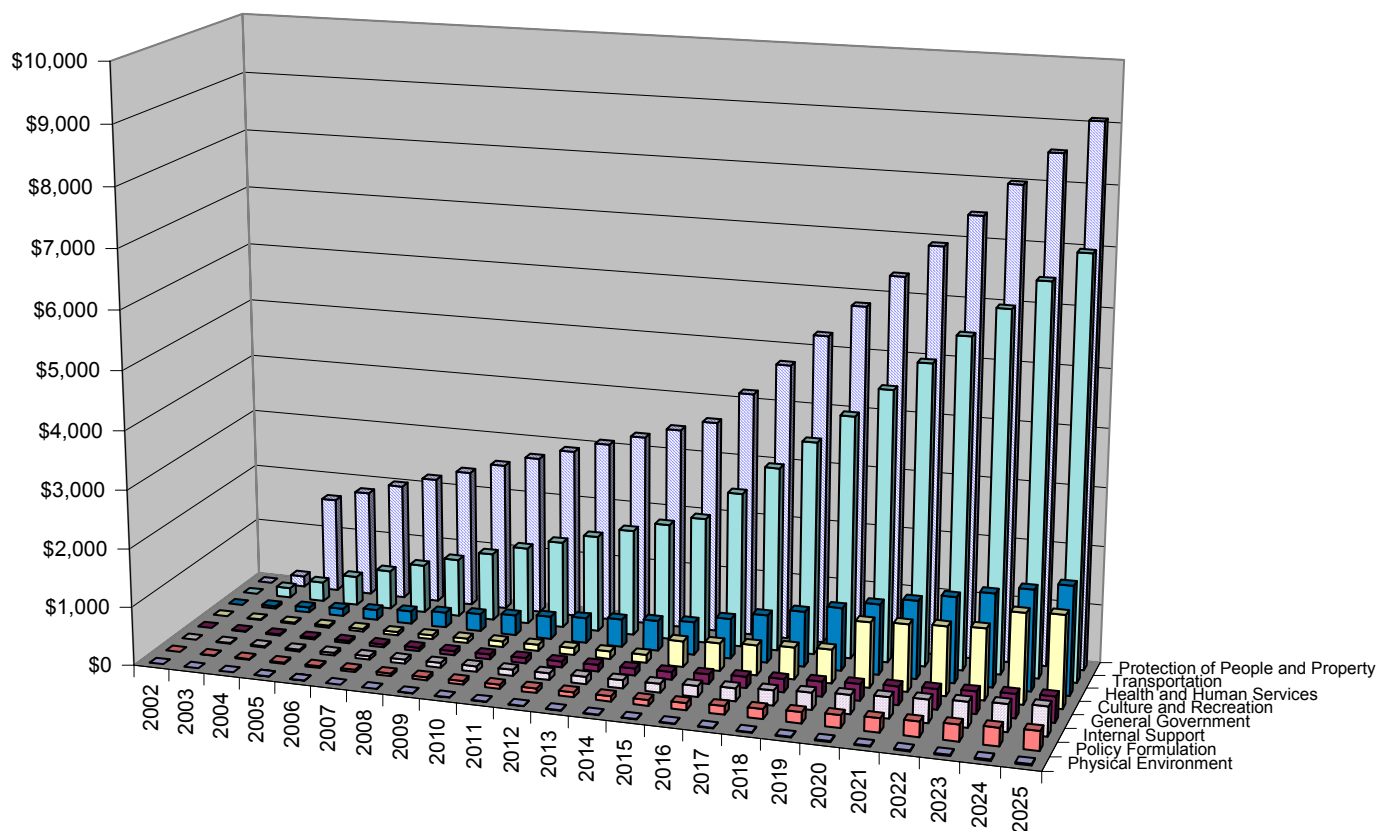
Capital Budget Revenue - Scenario Comparisons (x\$1,000)**Miami-Dade County Agricultural and Rural Area Study**

Category	SCENARIO					
	Rural Residential	%	Suburban Residential	%	Preferred	%
Fire Impact Fees	\$2,192	5%	\$14,880	5%	\$1,941	5%
Park Impact Fees	\$10,237	24%	\$69,496	25%	\$9,064	25%
Police Impact Fees	\$1,248	3%	\$8,472	3%	\$1,105	3%
Road Impact Fees	\$16,063	38%	\$109,050	39%	\$14,223	39%
Debt Service Property Tax	\$8,320	20%	\$49,477	18%	\$6,701	18%
Fire Rescue Debt Service Property Tax	\$1,685	4%	\$10,022	4%	\$1,357	4%
Capital Improvement Gas Tax	\$2,371	6%	\$20,228	7%	\$2,293	6%
TOTAL	\$42,116	100%	\$281,624	100%	\$36,683	100%

3. Operating Expenditures

The chart below shows annual growth-related operating expenditures for Miami-Dade County Government from 2002 to 2025 under the Preferred scenario. The operating expenditures are shown in constant 2002 dollars and the same general relationship occurs between the Preferred scenario and the other scenarios, with only differences in magnitude and/or minor variations of the relative differential between expenditure types. As the chart indicates, the greatest expenditures are for Protection of People and Property (primarily fire/rescue and police), Transportation, Health and Human Services and Culture and Recreation.

Annual Operating Expenditures - Miami-Dade County Government (x\$1,000)
Preferred Scenario



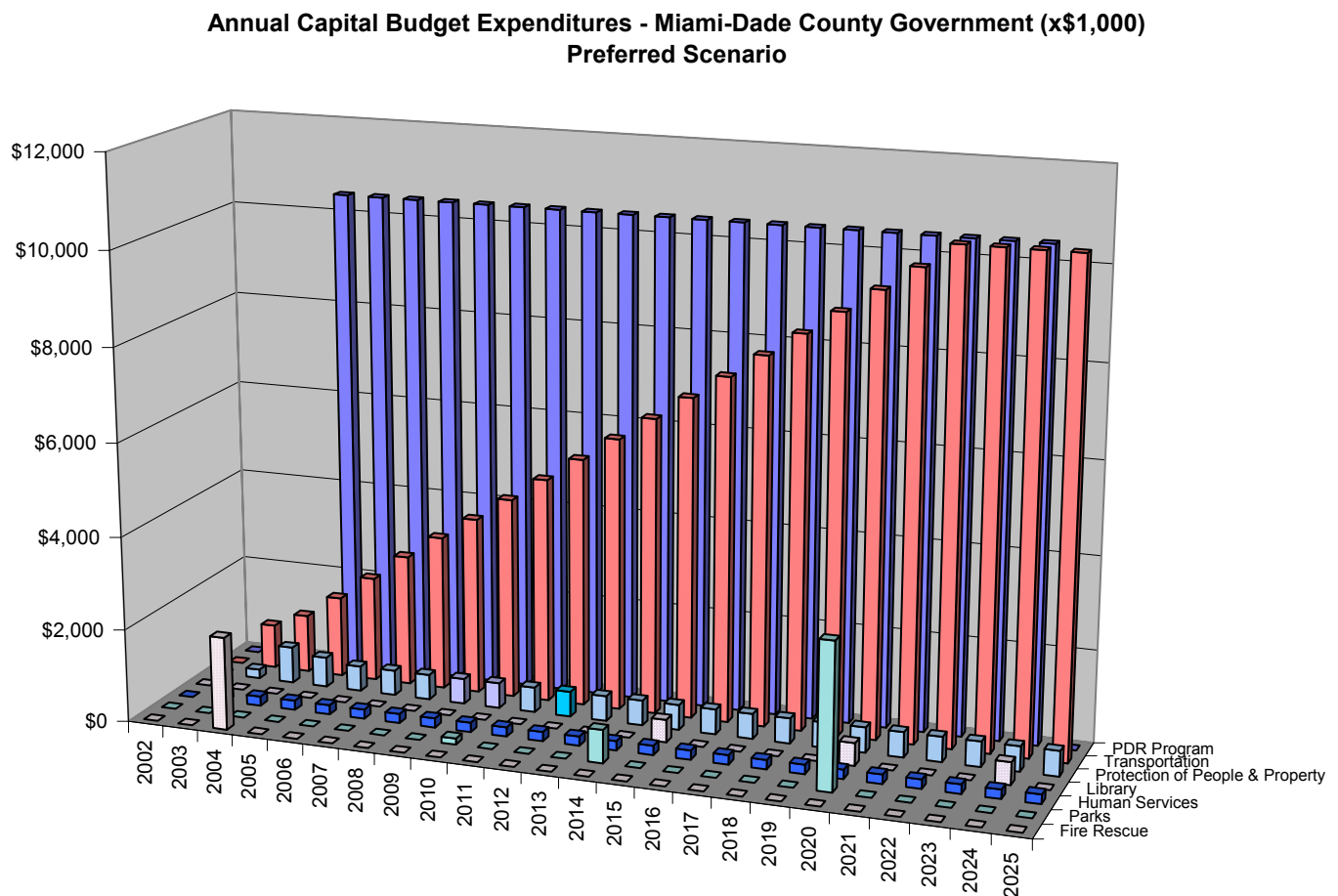
The table below shows cumulative operating expenditures for Miami-Dade County for all three scenarios, broken down by major category. Because of the lower amount of development assumed, the Preferred scenario generates the least cumulative operating expenditures at \$201.7 million. Due to the magnitude of residential development assumed under the Suburban Residential scenario, this scenario generates the greatest cumulative operating expenditures at \$1.7 billion. The Rural Residential scenario generates cumulative operating expenditures of \$216 million.

General Fund Operating Expenditures - Scenario Comparisons (x\$1,000)**Miami-Dade County Agricultural and Rural Area Study**

Category	SCENARIO					
	Rural Residential	%	Suburban Residential	%	Preferred	%
Policy Formulation	\$3,055	1%	\$26,062	2%	\$2,954	1%
General Government	\$4,078	2%	\$34,784	2%	\$3,943	2%
Internal Support	\$4,632	2%	\$39,512	2%	\$4,479	2%
Transportation	\$66,171	31%	\$564,434	33%	\$63,980	32%
Culture and Recreation	\$19,993	9%	\$130,455	8%	\$11,240	6%
Physical Environment	\$223	0%	\$1,902	0%	\$216	0%
Protection of People and Property	\$100,696	47%	\$761,354	45%	\$98,287	49%
Health and Human Services	\$17,230	8%	\$146,974	9%	\$16,660	8%
TOTAL	\$216,079	100%	\$1,705,477	100%	\$201,758	100%

4. Capital Expenditures

The chart below shows annual growth-related capital expenditures for Miami-Dade County Government from 2002 to 2025 under the Preferred scenario. The capital expenditures are shown in constant 2002 dollars. This chart depicts the “lumpy”, one-time nature of facility construction that occurs using a marginal cost approach for new facilities as well as the impact of the compounding nature of increasing debt service payments, which is illustrated by expenditures for transportation under this scenario, which assumes the majority of expenditures are debt financed, since impact fee revenue is not sufficient to cover the cost of necessary improvements.



The table below shows cumulative capital expenditures for Miami-Dade County for all three scenarios, broken down by major category. The Preferred scenario generates the second greatest cumulative capital expenditures of the three scenarios at \$376.9 million. Although less development is assumed under this scenario than under the Rural Residential scenario, capital expenditures are greater due to the debt service payments for the \$130 million bond issued for the purchase of development rights program. Capital expenditures for parks are higher under the Preferred scenario than under Rural Residential scenario although population growth is less. This is due to costs associated with the 7,380 housing units that are transferred out of the study into the Urban Development Boundary as part of the transfer of development rights program. The Urban Development has a higher level of service for parks than areas outside the boundary. Similar to operating expenditures, the Suburban Residential scenario generates the greatest cumulative capital expenditures at \$695.2 million due to the magnitude of residential development assumed under this scenario, which requires an extension of the Urban Development Boundary. The Rural Residential scenario generates cumulative operating revenue of \$206.7 million. As the table below illustrates, the greatest expenditures are for transportation improvements.

Capital Budget Expenditures - Scenario Comparisons (x\$1,000)**Miami-Dade County Agricultural and Rural Area Study**

Category	SCENARIO					
	Rural Residential	%	Suburban Residential	%	Preferred	%
Fire Rescue	\$2,000	1%	\$12,000	2%	\$2,000	1%
Parks	\$3,041	1%	\$202,376	29%	\$3,984	1%
Protection of People & Property	\$13,515	7%	\$67,483	10%	\$12,502	3%
Library	\$3,888	2%	\$20,400	3%	\$1,458	0%
Transportation	\$179,346	87%	\$369,826	53%	\$143,784	38%
Human Services	\$5,007	2%	\$23,184	3%	\$4,631	1%
PDR Program	\$0	0%	\$0	0%	\$208,631	55%
TOTAL	\$206,796	100%	\$695,270	100%	\$376,990	100%

V. FISCAL IMPACT RESULTS – SCHOOL BOARD

The fiscal impacts are discussed in terms of average annual and annual net results. The average annual results are discussed first in Part A below because it provides a good way of comparing multiple scenarios. Annual results are then discussed in Part B, followed by revenue and expenditure detail in Part C. All results are those from new growth only and do not include costs and revenues from the existing population and employment base of the study area.

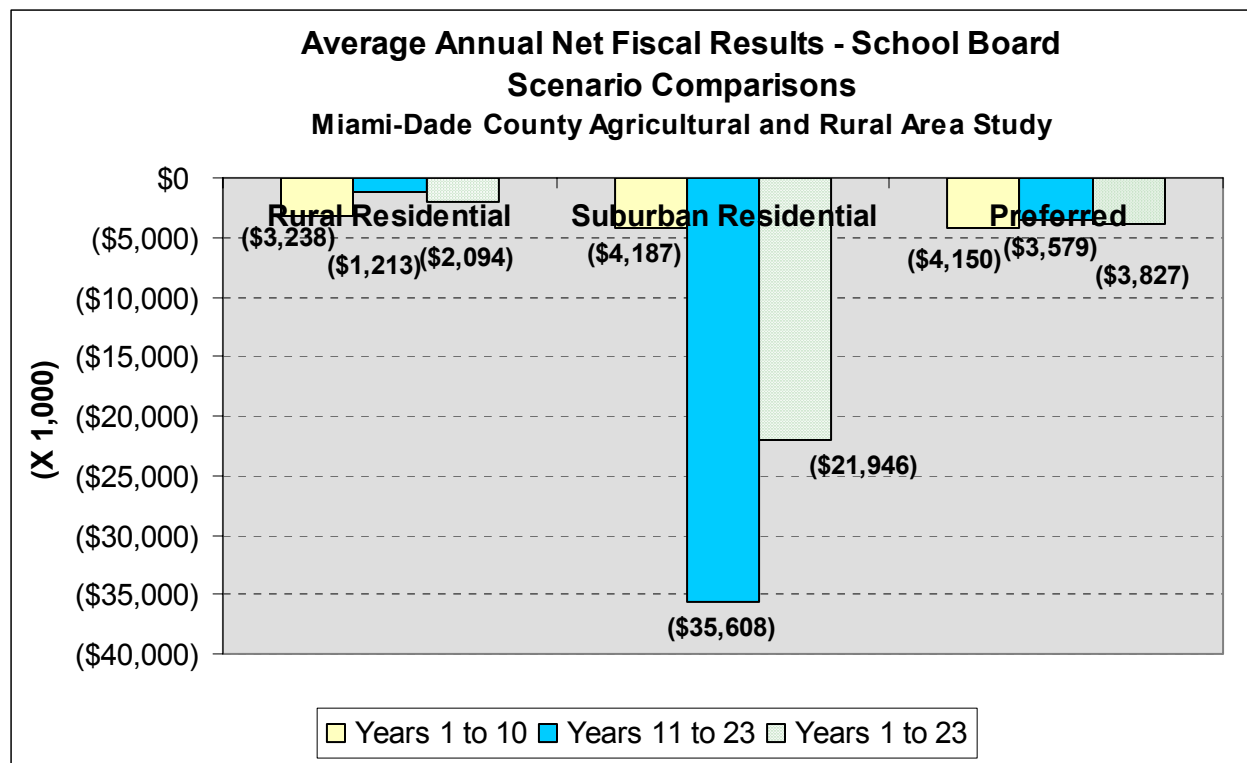
A. Average Annual Results

The charts below summarize the average annual net fiscal results (revenues minus expenditures). The fiscal results are presented for the School Board. The results are shown for three time periods: 1) Years 1-10, 2) Years 11-23, and 3) Years 1-23.

As the chart below indicates, new growth in the study area generates average annual net *deficits* to the School Board under all three scenarios. Compared to the Suburban Residential and Rural Residential scenarios evaluated previously, the Preferred scenario generates the second greatest average annual net deficits at \$3.8 million. Although school expenditures are lowest under this scenario due to fewest school age children generated, revenue is lowest as well.

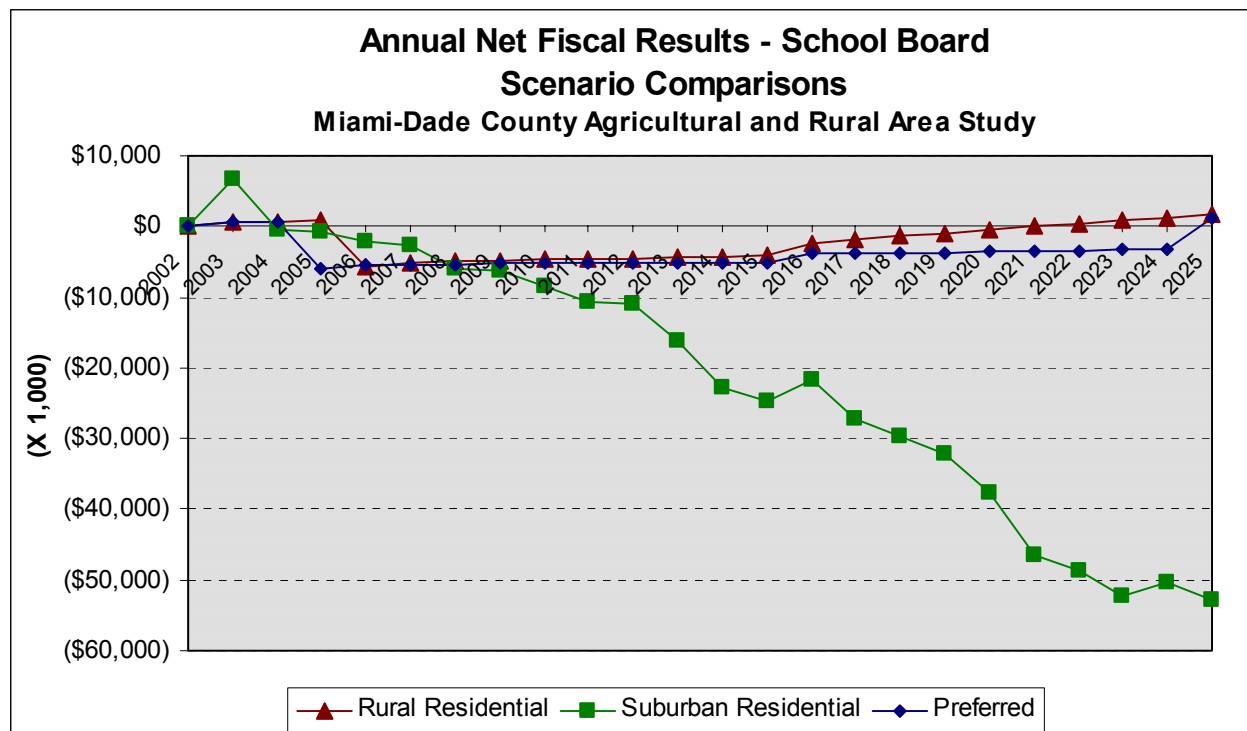
The largest average annual net deficits generated over the 23-year analysis period occur under the Suburban Residential scenario at \$21.9 million. The Rural Residential scenario generates average annual net deficits of \$2.1 million. As discussed in the previous analysis, the greater deficits generated by the Suburban Residential scenario are due to the magnitude of residential development assumed, which is six times that assumed under the Preferred and Rural Residential scenarios.

Because of the amount of current student capacity available in elementary and middle schools serving the study area, average annual deficits are much lower (\$4.1 million) during the first ten years under the Suburban Residential scenario, as fewer new schools are constructed. As available capacity diminishes and the annual growth rates increases during the later years, the average annual net deficits increase substantially to \$35.6 million. Because the need to construct an additional high school during the first ten years is the same under all three scenarios, the average annual net deficits generated by the Preferred and Rural Residential scenarios are higher than in the later years. Since no additional schools beyond the high school are constructed under these scenarios, the average annual net deficits decrease during the later years as the cumulative property tax revenue accruing to the School Board begins increasing at a faster rate.



B. Annual Results

The charts below show the annual net results for the School Board over the 23-year analysis period for the three scenarios. By showing the results annually, the magnitude, rate of change, and timeline of deficits and revenues can be observed over the 23-year analysis period.



The “bumpy” nature of the annual trend lines, particularly for the Suburban Residential scenario, result because capital costs and/or major operating costs are incurred during particular years. For example, when an enrollment threshold for a particular type of school is reached over time, a new school is “built” by the fiscal model. The same effect occurs when new staff is “hired” by the fiscal model, as is the case with the increased staffing cost associated with the opening of a new school necessitated by new growth.

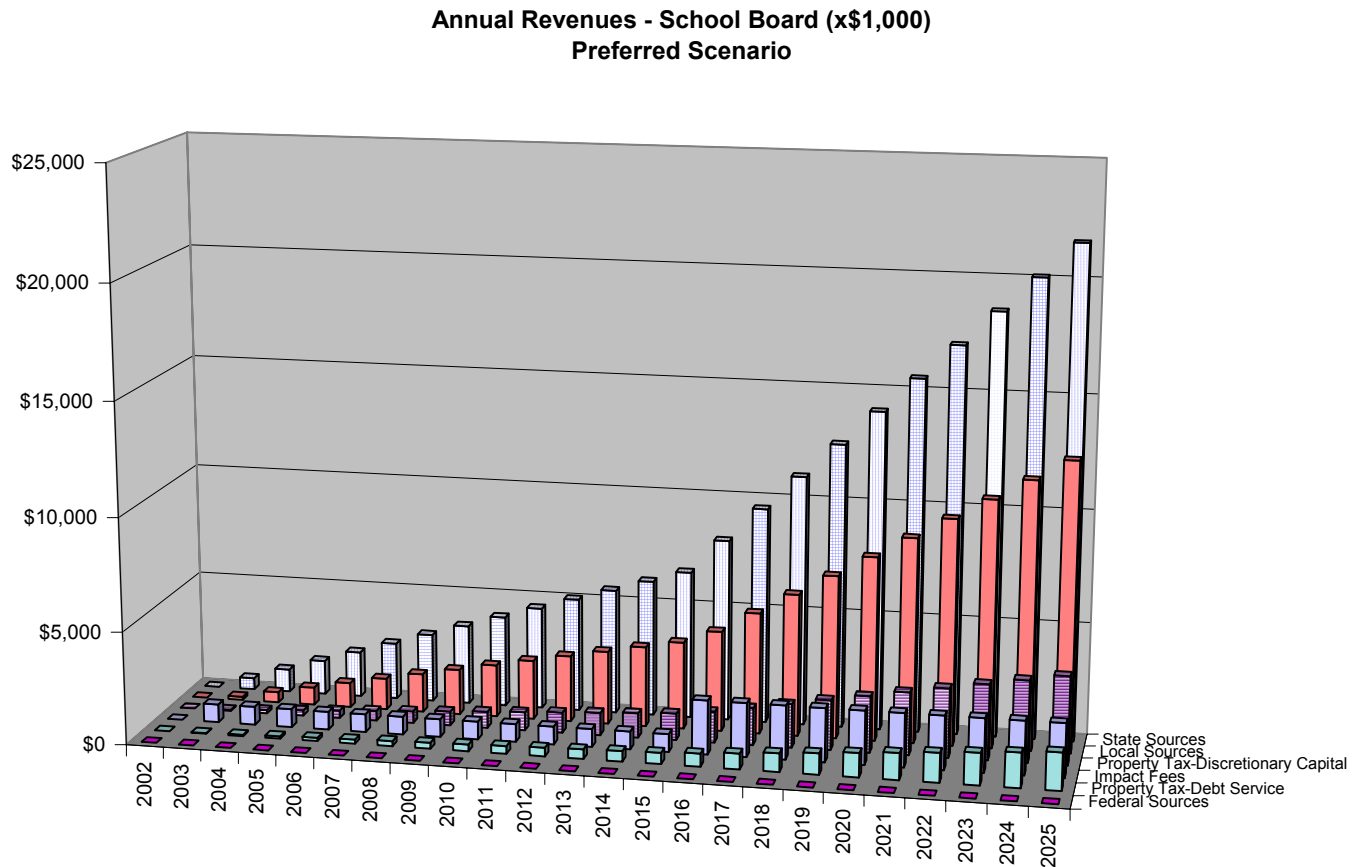
Annual net revenue is generated during the initial years of the analysis period under the Preferred and Rural Residential scenarios. Annual net deficits begin accruing after the construction of a new high school, the only school constructed under these scenarios. This is a result of the current student capacity available in schools serving the study area, combined with the relatively low number of school children generated under these scenarios. As this capacity is utilized and there is no construction of additional facilities beyond the one high school, the annual deficits begin decreasing.

The annual net results under the Suburban Residential scenario follow a distinctly different trend due the significant number of school-age children generated. After the net surplus generated during the first year, net deficits begin accruing as the first of twenty-two new schools are constructed under this scenario. Generally, the annual net deficits continue a declining trend throughout the remaining years of the analysis period as additional schools are opened to serve new growth.

C. Revenue and Expenditure Details

1. Revenue

The chart below shows annual growth-related revenue to the School Board from 2002 to 2025 under the Preferred scenarios. The revenue shown is in constant 2002 dollars and the same general relationship occurs between the Preferred scenario and the other scenarios, with only differences in magnitude and/or minor variations of the relative differential between revenue types. As the chart indicates, the greatest amount of revenue comes from the State of Florida, followed by local sources (property tax).



The table below shows cumulative revenue to the School Board for all three scenarios, broken down by major source. Compared to the Suburban Residential and Rural Residential scenarios evaluated in the previous analysis, the Preferred scenario generates the least cumulative revenue at \$389.6 million. This is because of the lower amount of residential development assumed under this scenario, which generates less of an assessed base for property tax and less enrollment, which plays a significant role in how State revenue is distributed. Due to the magnitude of residential development assumed under the Suburban Residential scenario, this scenario generates the greatest cumulative revenue at \$3.1 billion. The Rural Residential scenario generates cumulative revenue of \$439.6 million. Federal revenue sources are

considered fixed relative to new growth within the County, based on conversations with School Board staff.

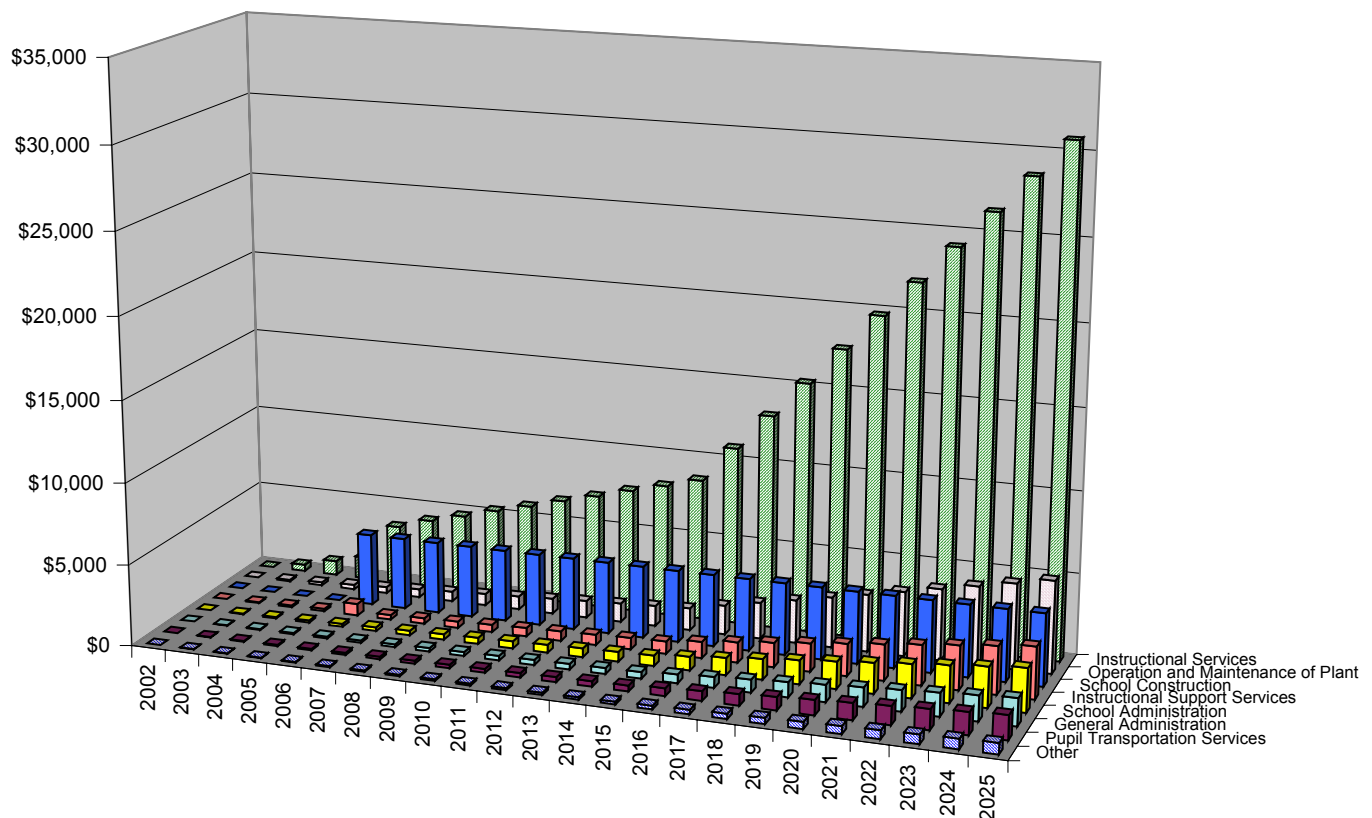
School Board Revenue - Scenario Comparisons (x\$1,000)
Miami-Dade County Agricultural and Rural Area Study

Category	SCENARIO					
	Rural Residential	%	Suburban Residential	%	Preferred	%
Local Sources	\$139,263	32%	\$828,165	26%	\$112,159	29%
State Sources	\$200,950	46%	\$1,714,086	54%	\$194,295	50%
Federal Sources	\$0	0%	\$0	0%	\$0	0%
Property Tax-Discretionary Capital	\$42,666	10%	\$253,727	8%	\$34,363	9%
Property Tax-Debt Service	\$18,091	4%	\$107,580	3%	\$14,570	4%
Impact Fees	\$38,645	9%	\$262,352	8%	\$34,217	9%
TOTAL	\$439,615	100%	\$3,165,911	100%	\$389,604	100%

2. Expenditures

The chart below shows annual growth-related School Board expenditures from 2002 to 2025 under the Preferred scenario. The expenditures are shown in constant 2002 dollars and the same general relationship occurs between the Preferred scenario and the other scenarios, with only differences in magnitude and/or minor variations of the relative differential between expenditure types. As the chart indicates, the greatest expenditures are for instructional services, operation and maintenance of plant and debt service for school construction.

Annual Expenditures - School Board (x\$1,000)
Rural Residential Scenario



The table below shows cumulative School Board expenditures for all three scenarios, broken down by major category. Because of fewer school children generated by the lower number of housing units assumed, the Preferred scenario generates the least cumulative expenditures at \$477.6 million. Due to the magnitude of school age children generated by the amount of residential development assumed under the Suburban Residential scenario, this scenario generates the greatest cumulative expenditures at \$3.6 billion. The Rural Residential scenario generates cumulative expenditures of \$487.7 million.

School Board Expenditures - Scenario Comparisons (x\$1,000)**Miami-Dade County Agricultural and Rural Area Study**

Category	SCENARIO					
	Rural Residential	%	Suburban Residential	%	Preferred	%
Instructional Services	\$272,841	56%	\$2,219,584	60%	\$266,877	56%
Instructional Support Services	\$26,645	5%	\$227,831	6%	\$25,780	5%
Pupil Transportation Services	\$12,192	2%	\$103,995	3%	\$11,788	2%
Operation and Maintenance of Plant	\$46,542	10%	\$396,996	11%	\$45,000	9%
School Administration	\$21,948	4%	\$187,215	5%	\$21,221	4%
General Administration	\$13,757	3%	\$117,349	3%	\$13,302	3%
Other	\$5,578	1%	\$47,583	1%	\$5,394	1%
School Construction	\$88,267	18%	\$370,127	10%	\$88,267	18%
TOTAL	\$487,770	100%	\$3,670,679	100%	\$477,628	100%